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Westinghouse Electric Company, a division of CBS Corporation Box 355 Pittsburgh Pennsylvania 15230-0355

NSD-NRC-98-5728

June 26, 1998

Mr. Robert L. Pettis Senior Reactor Engineer Office of Nuclear Reactor Regulation U.S. Nuclear Regulatory Commission Washington, DC

Subject: Supplemental Information Regarding the NRC Inspection of Westinghouse, June 15-17, 1998

Dear Mr. Pettis:

The following information is in response to your request for additional status regarding the issues raised during your inspection pertaining to ice condenser basket cracked screws.

I. Ice Condenser Basket Sheet Metal Screws

Westinghouse is investigating this situation as a Potential Issue (PI) within our 10 CFR Part 21 program as delineated in Westinghouse procedure ESBU-21. This investigation will include a review of both the TVA Central Laboratory Services report produced in June 1995 and the Gelles Laboratories report produced for American Electric Power in May 1998 and provided to Westinghouse in June 1998. Westinghouse has further committed to inform our utility customers whose plants incorporate ice condensers of the interactions between Westinghouse and the NRC on this issue.

A preliminary schedule for completion of the Potential Issue (PI) Investigation is as follows:

Completion Target

7/1/98

- 1. Perform metallurgical evaluation of D. C. Cook.Sheet Metal Screws (200 supplied by utility)
 - Preliminary results: 100 screws evaluated. Only two screws contained cracks: one was indication of a quench crack and one had cracks at the apex of the thread. Approximately ten (10) screws with screw heads broken off indicated failure due to overtorquing. No service induced failures were apparent.

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2.	Review screw design including coatings.	7/15/98
3.	Investigation and confirmation of the failure mechanism and root cause.	7/15/98
4.	Review of available reports and draft \underline{W} technical position. Includes:	7/22/98
	 Evaluation of Gelles Report supplied by D. C. Cook. Review 1995 Westinghouse Evaluation of TVA Central Lab Services Report 95-1021 (Preliminary and Final). Interface with Duke Power Company and TVA regarding previous metallurgical work. 	
5.	 Investigate consequences of having cracked screws. <u>CAR 98-1157</u>, "Design Documentation to assure correct screws specified". i) Review Vendor Purchase Order Documentation. ii) Revise Ice Basket Dwg./Spec to include screw required mechanical properties. iii) Issue report. 	7/22/98
	 <u>CAR 98-1170</u>, "<u>W</u> Report MSE-REE-1371 i) Address TVA Central Lab Services Report 95-1021 ii) Address consequences of ejected ice baskets hitting air handling units. iii) Address potential presence of additional cracked sheet metal screws. 	
6.	Conduct Test Program to establish load carrying capacity of Screws (if determined to be necessary).	8/14/98 (7/31 Preliminary)

2. Additional Information on the Evaluation of the TVA Central Laboratory Services Report, June 1995

Westinghouse is continuing to assess the circumstances and decisions made in 1995 regarding the TVA report and the potential impact on ice condenser equipment. However, we do note that the issue of ice basket screw cracking was given a broad dissemination at the time of its discovery in 1995 and at various times thereafter. For example, the issue of ice basket sheet metal screw failures was discussed at length at the "International Ice Condenser Utility Group Symposium" held from June 26-28, 1995. This symposium, hosted by American Electric Power at their Cook Nuclear Plant facility in Bridgman, Michigan was attended by all three domestic ice condenser utilities. We also note that the NRC may have reviewed sheet metal screws issues during the course of its oversight activities prior to issuing the Watts Bar OL in 1995 and again as a part of an inspection at TVA in 1997 (NRC Inspection Report 97-04).

• . Mr. Robert L. Pettis

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D. C. Cook Gelles Report, June 1998

Finally, we would like to reiterate our position that, at the time of the NRC's recent inspection, the issue of ice basket screws cracked at D. C. Cook was being assessed by our cognizant engineering organization to reach the necessary engineering conclusions that are a prerequisite to determining whether to institute a Part 21 investigation. In accordance with the Part 21 regulations and our Part 21 procedure, these conclusions, as well as any other information available to us, including the fact and extent of the NRC's prior knowledge of the issue, would have then been taken into account in any decision to commence a formal Part 21 investigation. As was noted to the inspection team, the engineer responsible for conducting our preliminary evaluation of the Gelles report was only a short time away from completing his assessment so that the appropriate determinations on this issue under Part 21 could be made.

Westinghouse is always willing to meet with the NRC to further discuss any facet of this issue. Should you wish to discuss this further, please contact Mr. H. A. Sepp, Manager, Regulatory and Licensing Engineering at (412) 374-5282 at your convenience.

Very truly yours,

1.H. Leparulo

N. J. Liparulo, Manager Equipment Design and Regulatory Engineering

Enclosures

cc: Mr. Melvin S. Holmberg Reactor Inspection NRC Region III 801 Warrenville Road Lisle, Il 60532

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Westinghouse Electric Company, a division of CBS Corporation

Box 355 Pittsburgh Pennsylvania 15230-0355

NSD-NRC-98-5728

June 26, 1998

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I. Ice Condenser Basket Sheet Metal Screws

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Mr. Robert L. Pettis

7/15/98 Review screw design including coatings. 2. 3. Investigation and confirmation of the failure mechanism and 7/15/98 root cause. 4. Review of available reports and draft W technical position. 7/22/98 Includes: - Evaluation of Gelles Report supplied by D. C. Cook. - Review 1995 Westinghouse Evaluation of TVA Central Lab Services Report 95-1021 (Preliminary and Final). - Interface with Duke Power Company and TVA regarding previous metallurgical work. 7/22/98 5. Investigate consequences of having cracked screws. - CAR 98-1157, "Design Documentation to assure correct screws specified". i) Review Vendor Purchase Order Documentation. ii) Revise Ice Basket Dwg./Spec to include screw required mechanical properties. iii) Issue report. - CAR 98-1170, "W Report MSE-REE-1371 Address TVA Central Lab Services i) Report 95-1021 ii) Address consequences of ejected ice baskets hitting air handling units. iii) Address potential presence of additional cracked sheet metal screws. 6. Conduct Test Program to establish load carrying capacity of 8/14/98

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Screws (if determined to be necessary).

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(7/31 Preliminary)





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3. D. C. Cook Gelles Report, June 1998

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Very truly yours,

N.A. Leparulo

N. J. Liparulo, Manager Equipment Design and Regulatory Engineering

Enclosures

cc: Mr. Melvin S. Holmberg Reactor Inspection NRC Region III 801 Warrenville Road Lisle, Il 60532



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